

Lisa Giampa, MRT(N); Yusuaf Omarkhail, MRT(N); Krystle Luu, RN, BScN, MN; Romina Ahrari; Dolores Dimitropoulos, BSc. MRT(R); Monica Da Silva, RN MHA; Dr. Jonathan Mandel, MD FRCPC; Dr. Najaf Nadeem, MBBS, FRCPC, FACC, MBA

DESCRIPTION

Nuclear Cardiology services are a collaborative effort between the Departments of Medical Imaging and Cardiology at Humber River Health (HRH). Prior to the COVID-19 pandemic, the team had the capacity for high patient volumes (up to 19 patients per day), but faced challenges with low throughput. During the pandemic, services were significantly scaled back. As operations resumed post-pandemic, a multidisciplinary working group, including physicians, technologists, and administrative staff, were established to identify the root causes of low utilization. The group worked to implement corrective measures aimed at increasing patient volumes, reducing cancellation, and minimizing missed appointments.

OBJECTIVE

To improve patient throughput in Nuclear Cardiology utilizing a collaborative, multidisciplinary approach, and process optimization.

ACTIONS TAKEN

1. The team initiated workflow mapping to standardize processes and improve communication between departments.
2. Data collected and evaluated to assess utilization rates, and feedback provided to Cardiologists regarding opportunities for improvement.
3. Patient reminder calls and exam preparation guidelines were reinforced to increase attendance.
4. Capacity was expanded (17 patients per day), though not to pre-pandemic levels (19 patients per day), in an effort to increase service volumes while maintaining a balance with Infection Prevention and Control protocols, and ensuring patient safety.

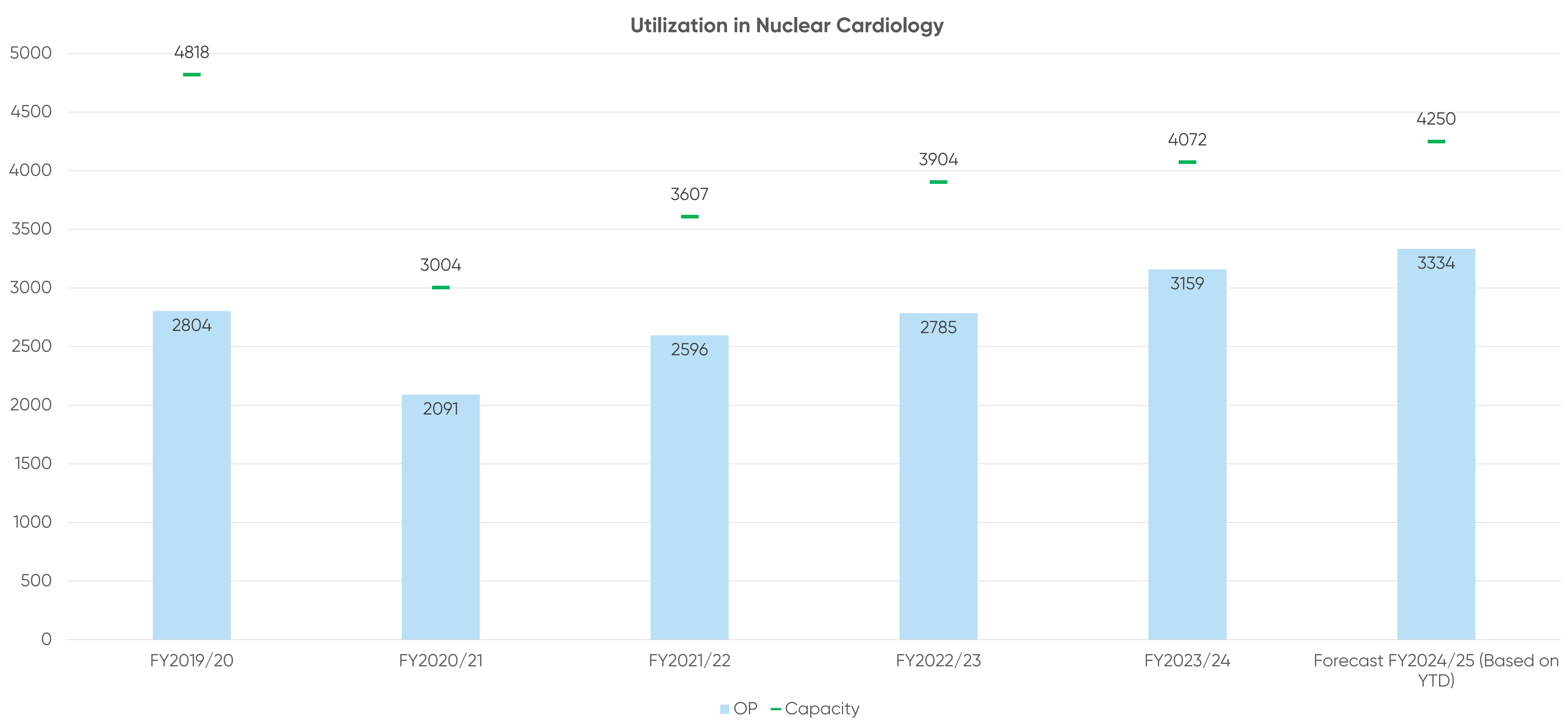


Figure 1. Utilization in Nuclear Cardiology.

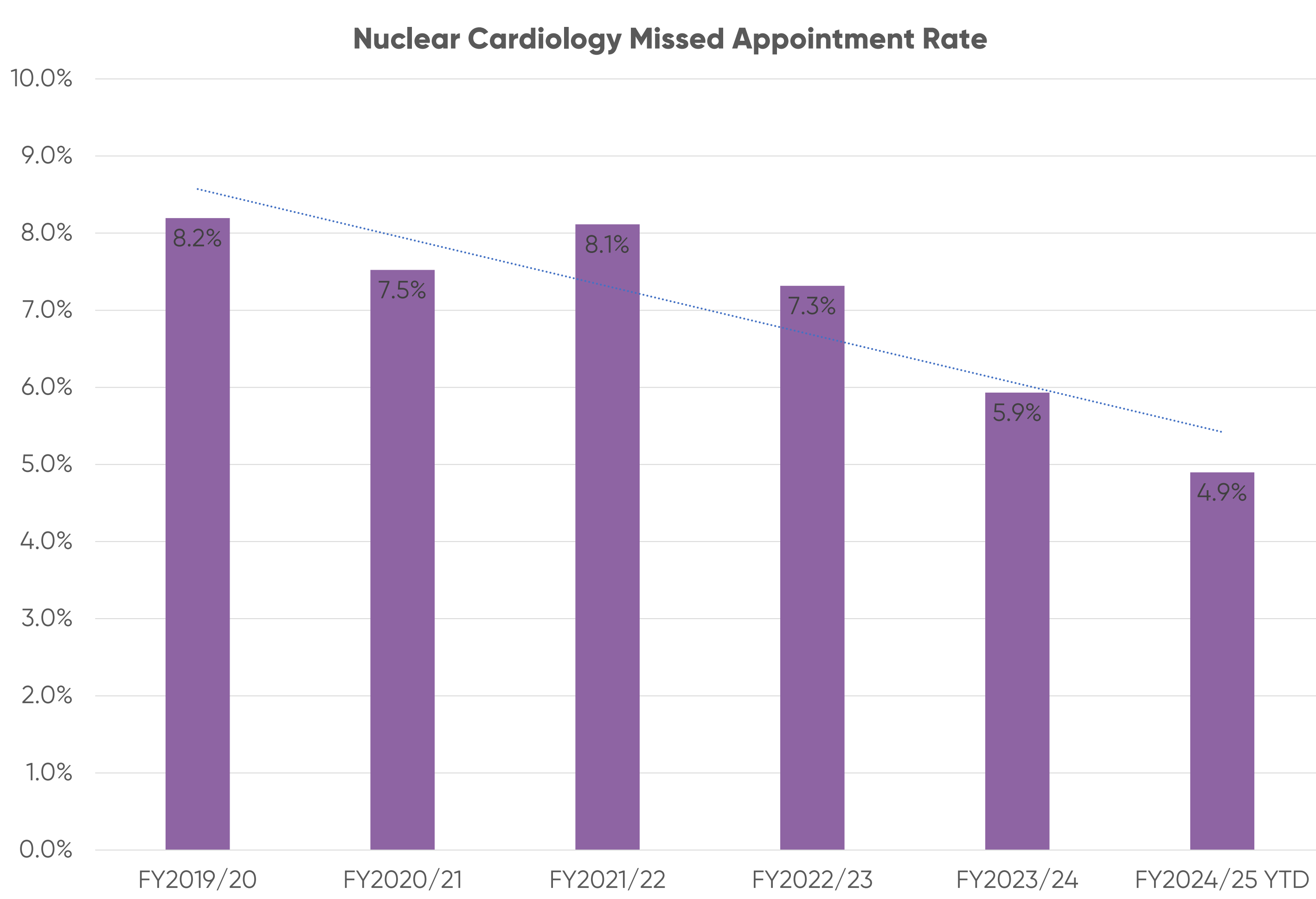


Figure 2. Nuclear Cardiology Missed Appointment rate.

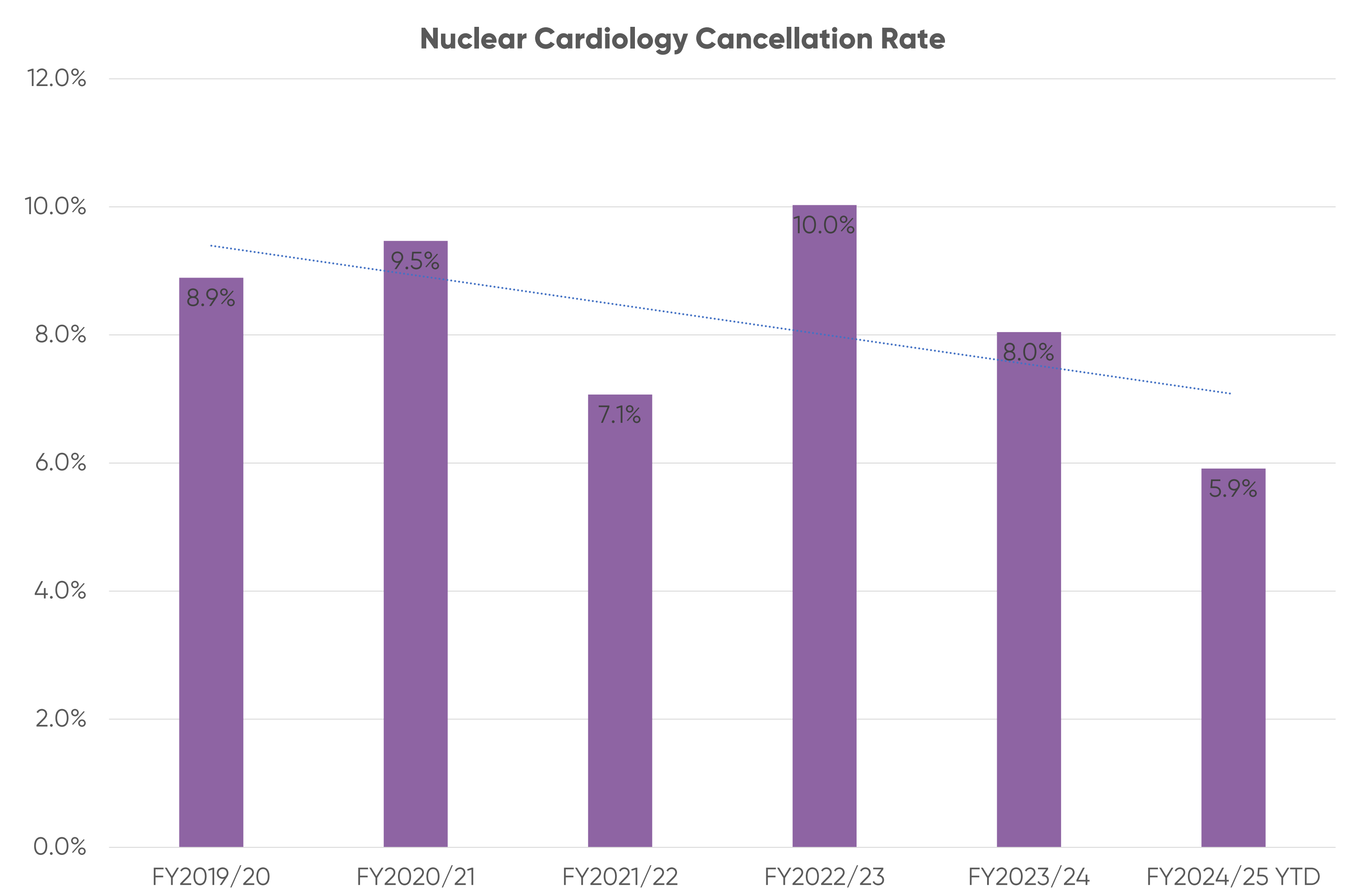


Figure 3. Nuclear Cardiology Missed Appointment rate.

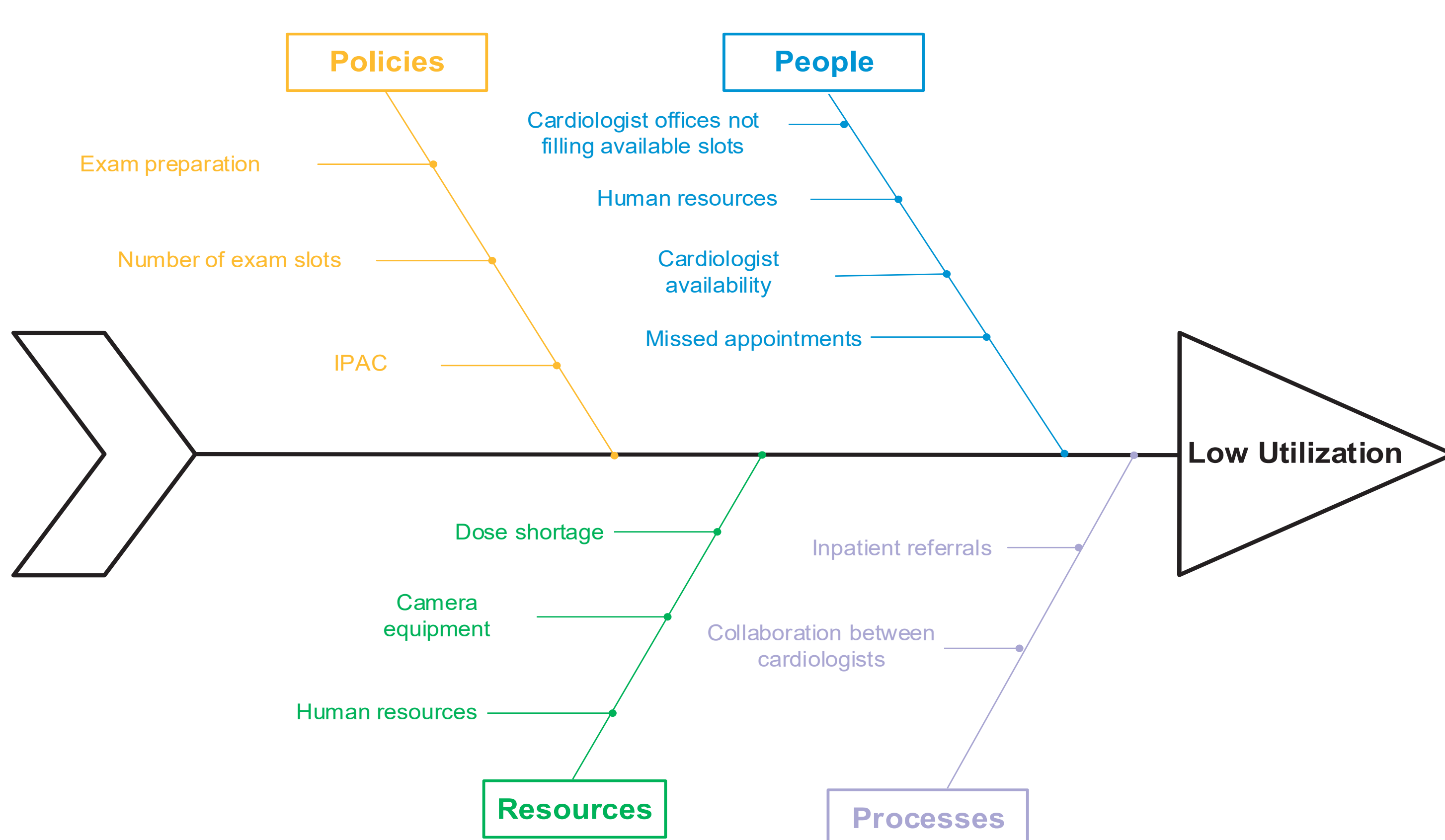


Figure 4. Fishbone diagram completed to assess the challenges resulting in low utilization.

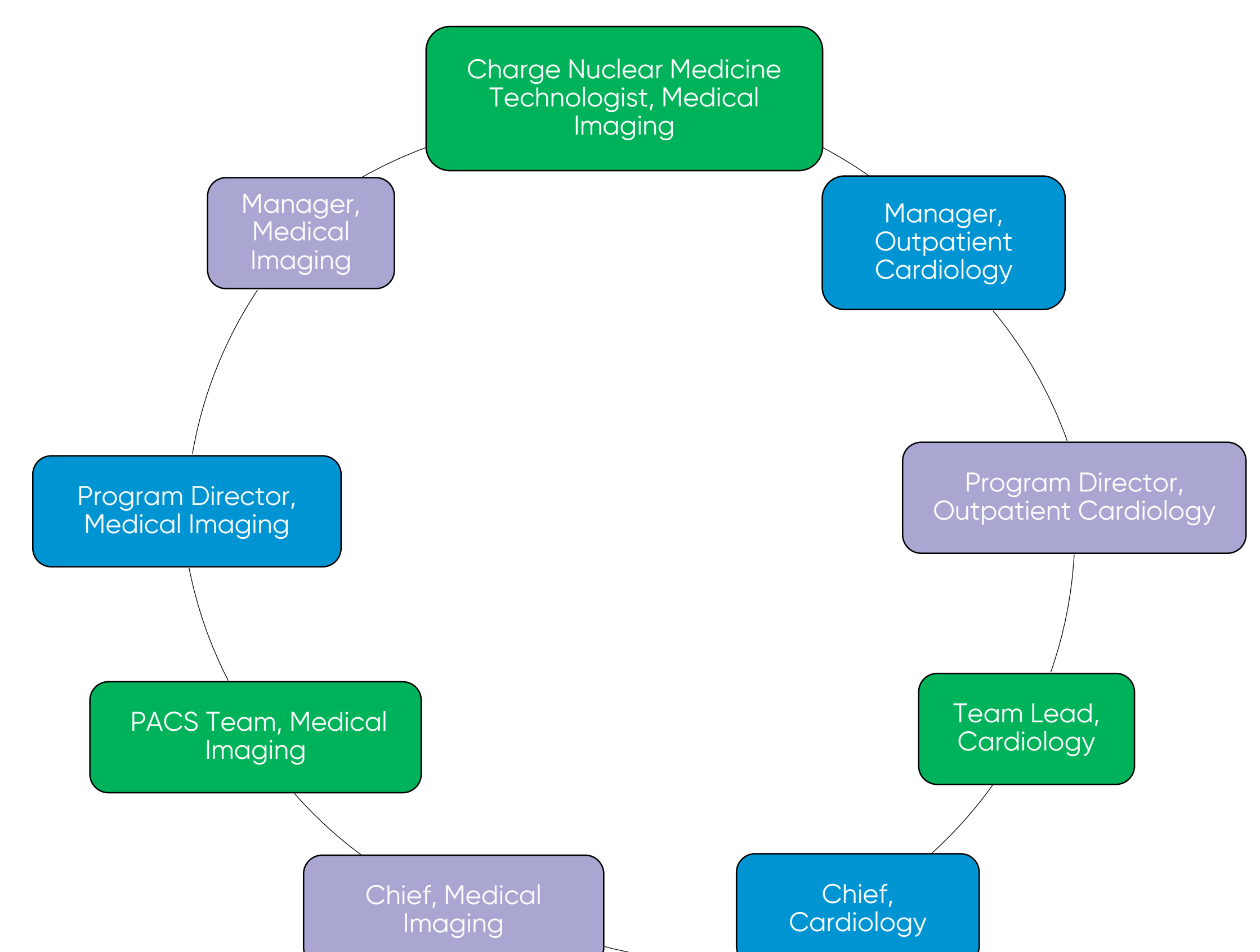


Figure 5. Nuclear Cardiology working group's multidisciplinary members.

SUMMARY OF RESULTS

The Nuclear Cardiology Department at HRH experienced steady year-over-year growth in exam volumes. After a dip in fiscal year (FY) 2020/21 (4,181 exams) due to the pandemic, volumes rebounded in FY2021/22 to 5,192 and surpassed pre-pandemic levels in FY2022/23 with 5,570 exams. With the optimizations of the working group, the upward trend continued into FY2023/24, reaching 6,318 exams. Forecasts for FY2024/25 predict further growth, estimating 6,668 exams. Concurrently, outpatient missed appointments and no shows decreased, due to the groups standardizations efforts and enhanced patient reminder calls.

LESSONS LEARNED

A focused interprofessional approach to workflow optimization, improved patient communication, and data analysis can significantly enhance service efficiency and output.

